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RETARDATION STATISTICS OF THREE CHICAGO SCHOOLS

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Ayres's *Laggards in Our Schools* has been the means of directing the attention of the educational world to the problem of the progress of pupils through the schools. Ayres's statistics go to show that many children do not advance through the grades at the rate expected of the normal child, that they are then retarded and many of the retarded ones are eliminated before they reach the eighth grade. He defines retardation as "referring to the pupil who is above the normal age for his grade; elimination is the dropping out of pupils upon reaching the age of compulsory attendance without having reached the eighth grade."[1] He gives a table defining the normal ages for the eight grades of the elementary school. "These ages," he says, "have been accepted by common consent as the 'normal ages' for these grades by nearly all schoolmen who have interested themselves in the problem."

Normal Ages of Children in the Grades[2]

First Grade	6 to 8 years
Second Grade	7 to 9 years
Third Grade	8 to 10 years
Fourth Grade	9 to 11 years
Fifth Grade	10 to 12 years
Sixth Grade	11 to 13 years
Seventh Grade	12 to 14 years
Eighth Grade	13 to 15 years

On the basis of this assumption of normal ages there is compiled a table showing the age and grade distribution in Memphis, Tenn., in June, 1908, and the number and percentage of retarded pupils.[3] After the same method he computes the retardation in

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[1] P. 8,

[2] P. 38.

[3] P. 37.

31 cities with resulting percentages ranging from 7.5 per cent for Medford, Mass., to 75.8 per cent for Memphis, Tenn. (colored) and an average of 33.7 per cent children above normal age for their grade.[4]

TABLE SHOWING AGE AND GRADE DISTRIBUTION FOR MEMPHIS, TENN.*

Age	Grade								Total
	1	2	3	4	5	6	7	8	
6	782	11							793
7	609	177	50						932
8	368	403	131	5					907
9	120	349	333	104	8				914
10	44	191	335	264	67	6	1		908
11	21	81	230	302	219	83	9		945
12	12	45	109	229	201	203	77	6	882
13	1	13	43	126	182	245	178	63	851
14	4	6	25	44	85	158	175	130	627
15	1	2	6	10	26	69	92	110	316
16			1	3	8	25	43	73	153
17	1			2	1	1	3	10	18
18					1		1		2
Total	2,053	1,278	1,269	1,089	798	790	579	392	8,248
Above normal age	572	687	749	716	504	498	314	193	4,233
Percentage above normal age	27.8	53.7	59.0	65.7	63.1	63.0	54.2	49.2	51.3

* Ayres, *op cit.*, p. 37.

The next problem which Ayres attacks is how to determine the number of beginners in a given year. The number in the first grade is composed of the beginners for that year plus the retarded ones who have entered one, two, three, or more years before. Upon making an age distribution of the children in the schools of Medford, Mass., on September 30, 1907, there was found to be little variation between the numbers between the various age groups from seven to twelve inclusive. He concludes, then, that all the children are in school between those ages and an average of the numbers in the six groups will closely approximate the number of beginners.

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[4] P. 45.

Rates of progress through the grades is the interesting problem taken up on p. 73. A comparison of slow and rapid pupils in 5 cities shows that the children making slow progress are from six to fourteen times as numerous as those making rapid progress save in one exceptional case where the slow ones are one hundred and twenty-four times as numerous. Of 9,489 pupils of New York City, 5 per cent reached their present grades in 86 per cent of the normal time; 55 per cent in 100 per cent of the normal time, and 40 per cent in 128 per cent of the normal time. From a set of data showing the time required to do the work of four grades in each of 29 cities, Ayres computes the time required by the average child to do the work of eight grades.[5] The average of the items of the data just mentioned gives 4.67 years for the completion of the work of the first four grades. Doubling this figure gives 9.34 years for the time necessary to complete eight grades. To this is added 0.8, the computed difference between the ages of the beginners and of the first grade, making ten years the time necessary to complete eight grades.

In order to test the validity of Mr. Ayres's conclusions and to find out something of the actual situation I made an investigation of 3 schools of Chicago. The conclusions quoted above are only those from Mr. Ayres's book which are comparable with the findings of my own work. I went to each school and made from the principal's register two tables, one showing the age and grade distribution as does the one for Medford, Mass., quoted above, and the other showing the number of weeks spent in each grade by the pupils in that grade. These represent conditions as existing upon the entrance of the child in school on September 1, 1909. In the age columns of each register the age of the child in years and months is recorded at the time of his entrance. In my table the months have been disregarded and the age in years is recorded. A child was counted as six years old if he had passed his sixth and not yet reached his seventh birthday upon entering school in September. Thus the six-year-old group includes all children between six and seven, the seven-year-old group includes all between seven and eight, etc. The same thing is not true for the five-year-old group. The school law of Illinois allows children to be admitted to school after the sixth birthday, but it is the practice of principals to admit five-year-old children if they will reach the sixth birthday early in the term in which they are admitted. Thus the five-year-old group includes those whose ages are between five years and seven months and six years.

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[5] These figures were found by taking the difference between the average ages of the first- and fifth-grade pupils. The normal difference would be four years.

A third mass of data was obtained in the following manner. The 1903 registers for two schools and the 1902 register for the third school were brought out. The names of the children in the first grade of each register were copied and the progress of each child as portrayed by the registers of each succeeding year up to and including that for September, 1909, was traced through. Out of an original total of 511 names only 135 were found still upon the register of the school in which they were found as first graders. This 135, however, forms a beginning of the authentic individual school histories which Thorndike has so often pointed out as necessary before conclusions upon school progress can be reached with accuracy. A second method of getting the same kind of information which will be described later was followed in one of the schools.

One of these schools, which I shall call School A, is situated in the district most highly favored intellectually and financially, short of great wealth, in Chicago. It is attended by the children of teachers and other professional men. School B is situated in a contiguous district inhabited largely by working people of the higher classes, skilled workers and others receiving trade-union wages. So far as the normal physical standard of food, housing, and clothing are concerned there is no difference between the districts. The same may in general be said of the district of School C, except that it contains a large percentage of Negroes. This race constitutes between one-fourth and one-third of the school membership.[6]

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[6] Estimated as the lines marched out of the building as the register did not show nationality or race.

Table I shows the age-grade distribution for School A. According to Ayres's definition the numbers above and to the right of the heavy line are retarded. Thus there would be two in the first grade, thirteen in the second, seventeen in the third, and so on. But upon comparing Table I with Table II it will be seen that the number of beginners in September is exactly equal to the number of five- and six-year-old children in the school at that time. One is led to believe, then, that children enter the school before the age of seven. The assumption is further borne out by the statement made by the principal of this school. He has for several years averaged the ages of the beginners and of the graduates. These averages have always been six plus a small fraction and fifteen plus a small fraction respectively. We must then set six years for the standard for the normal age of the first grade instead of seven as Ayres has done. The double rule of Table I shows the division between the normal and retarded pupils according to this now more probable standard. The first column to the right of the column headed *total* gives the percentage of retardation according to Ayres's standard, the second column gives the retardation according to

TABLE I

AGE AND GRADE DISTRIBUTION FOR SCHOOL A

GRADE	AGE															TOTAL	PERCENTAGE OF RETARDATION *	PERCENTAGE OF RETARDATION †
	5	6	7	8	9	10	11	12	13	14	15	16	17	18	?			
I	13	100	37	2												152	1.3	25.6
II ..		14	75	40	6	7										142	9.1	37.3
III ..			8	57	39	13	4									121	14.0	49.5
IV...				12	48	47	16	8	5		1					137	21.1	56.2
V....				2	9	31	31	27	19	6	4					129	43.4	67.4
VI ..						11	37	30	23	7	5					113	30.9	57.5
VII..						2	6	29	28	13	9	3	1			91	28.5	59.3
VIII.								6	31	30	16	2	1	1		87	22.9	57.4
Total	13	114	120	115	102	111	94	100	106	56	35	5	2	1		980		

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* According to Ayres's age standard.

† According to the more probable standard.

the more probable standard. The percentages according to the two standards run as follows:

	Grade							
	I	II	III	IV	V	VI	VII	VIII
Ayres's standard	1.3	9.1	14.0	21.1	43.4	30.9	28.5	22.9
Newer standard	25.6	37.3	49.5	56.4	67.4	57.5	59.3	57.4

The age and grade tables for the schools B and C are not essentially different except that the retardation for the first three grades are higher. The three schools are combined in Table III. In School B the actual number of beginners is 88 and the number of five- and six-year-old children is 79. In School C the actual number of beginners is 125, of five- and six-year-old children, 104. The combined tables, III and IV, show 326 beginners and 296 five- and six-year-old children, making a total discrepancy of 30. This discrepancy is accounted for to some extent by the gaps in the information columns of the registers. Occasionally the age column or the weeks-in-grade column was not filled in. Were it not for this the various corresponding totals of the two sets of tables would be identical. However, a few children do enter school later than six years of age.

TABLE II

SHOWING TIME SPENT IN EACH GRADE UPON ENTERING SCHOOL SEPTEMBER 1, 1909, SCHOOL A. FIGURES BELOW DOUBLE RULE SHOW NUMBER CERTAINLY REPEATING GRADE

Weeks in Grade September, 1909	Grade 1	Grade 2	Grade 3	Grade 4	Grade 5	Grade 6	Grade 7	Grade 8	
0 (beginners)	113	75	69	76	67	73	47	45	Possibly normal
0–10	14	20	13	0	1	2	3	0	" "
11–20	11	40	45	55	49	51	40	33	" "
21–30	5	6	1	3	3	0	1	0	" "
31–40	9	12	2	15	16	4	6	6	Repeating grade
41–50	...	2	...	...	...	...	0	...	" "
51–60	...	1	...	...	...	...	4	...	" "
61–70	...	...	...	...	...	...	...	...	" "
71–80	...	...	...	...	2	...	...	...	" "
Total	152	156	130	149	137	130	97	84	
Percentage of repeaters	5.9	9.0	1.5	10.0	13.1	3.0	10.0	7.1	

TABLE III

AGES AND GRADE TABLE FOR THE THREE SCHOOLS COMBINED

GRADE	AGE														TOTAL	PERCENTAGE OF RETARDATION *	PERCENTAGE OF RETARDATION †
	5	6	7	8	9	10	11	12	13	14	15	16	17	18			
I....	39	257	163	25	13	3	1			1		1			533	8.2	40.7
II ...		30	172	103	32	15	9	1							362	15.7	44.1
III ..			29	135	120	48	20	8	2		1				363	24.2	54.8
IV ..				37	116	132	63	30	26	4	3			1	412	30.8	62.8
V ...				3	23	93	98	70	55	16	6				364	40.3	67.3
VI...					2	47	90	81	66	43	16	1	1		347	36.0	59.9
VII..					1	6	29	74	77	46	32	6	2		273	31.5	59.7
VIII.							4	29	84	83	53	9	2		264	24.2	55.6
Total	39	287	364	303	407	344	314	293	310	192	111	17	5	1	2,918		

* According to Ayres's standard.

† More probable standard.

TABLE IV

SHOWING LENGTH OF TIME IN GRADE (ENTERING SEPTEMBER, 1909) FOR THE THREE SCHOOLS COMBINED. THOSE BELOW DOUBLE RULE ARE CERTAINLY REPEATING GRADES

WEEKS IN GRADE SEPTEMBER, 1909	GRADE								
	I	II	III	IV	V	VI	VII	VIII	
0 (beginners)....	326	172	203	247	168	217	124	133	Possibly normal
0–10............	28	57	17	23	4	6	3	...	" "
11–20...........	43	81	104	92	148	110	98	105	" "
21–30...........	33	11	10	7	15	1	5	1	" "
31–40...........	53	38	41	37	37	15	15	20	Repeating grade
41–50...........	6	10	2	3	...	...	1	...	" "
51–60...........	4	2	1	...	1	...	4	...	" "
61–70...........	3	...	...	...	...	...	...	...	" "
71–80...........	1	...	...	...	...	1	...	...	" "
81–90...........	2	...	...	...	...	...	...	...	" "
91–100..........	1	...	...	...	...	...	...	...	" "
151–160.........	1	...	...	...	...	...	...	...	" "
Total	501	371	378	409	373	350	250*	259	
Percentage of repeaters......	14.1	13.4	11.6	9.7	10.1	4.5	8.0	7.7	

* In School B in the seventh grade were 41 pupils whose record as to length of time in grade could not be found. These added to the 250 on record makes a total of 291 in the seventh grade. Had the record of each pupil been full the various totals of the corresponding tables would be the same. All percentages are calculated upon the known figures.

Tables II and IV are made out from the column of the register showing the number of weeks each child had already spent in the grade in which he entered in September, 1909. Table II shows the situation for School A alone, Table IV for the three schools. The registers show in which grade a child is enrolled upon entering school—as Grade 1, 2, 3, etc.—and the number of weeks he has already spent in that grade upon enrolment. They do not show in which half of the grade the pupil is enrolled. Thus if it is shown that a certain individual is in Grade 3 and has spent 20 weeks in that grade upon his enrolment in September, one does not know whether he is beginning the second half of Grade 3 or repeating the first half. If, however, an individual is enrolled in September in a grade in which he has already spent 30 weeks it is almost certain that before he can leave that grade, assuming that he is in the second half, he will have spent 50 weeks in the grade. So far as time in that particular grade is concerned, he is retarded ten weeks, and some time during the 20-week period necessary to complete a half-grade he is a repeater. According to this standard, then, those below the double rule in Tables II and IV are certainly repeaters. It is as certain that some above that line are repeaters. Those in the column marked "0 to 10" are most probably repeating that half of the grade in which they have spent more than 0 weeks and less than 10. Some of those in the column marked "11 to 20" are repeating that half of the grade in which they have spent the time indicated, etc. Therefore the percentage of repeaters shown in the last column of the table is too low. The percentage of known repeaters for the three schools is as follows:

	Grade							
	I	II	III	IV	V	VI	VII	VIII
School A	5.9	9.0	1.5	10.0	13.1	3.0	10.0	7.1
School B	27.0	31.9	19.6	5.1	8.1	8.6	11.3	7.9
School C	8.0	5.3	15.0	11.4	10.0	1.9	4.4	8.0
Combined	14.1	13.4	11.6	9.7	10.1	4.5	8.0	7.7

The register of School A for 1902 contained the names of 120 first-grade children. Of these 23 were still in the school in

September, 1909. In the registers of this school, with the help of the principal, it was possible to find in which half of a grade a child was enrolled upon entering school in any year. The school careers of these 23 children are shown in Table V. The first column indicates the individual pupil in Grade I in 1902, the second column his age in 1902, and the third column the term in which he entered school. If *before* is written in this column his standing in school indicated that he had entered school before the time of the earliest record found which is marked in the column. The superior figures 1 and 2 with the pupil's and the grade number indicate in which half he was enrolled upon entering school in any year: 1 means the first half or low fifth, low sixth, etc.; 2 means the second half or high fifth, high sixth, etc. The table, then, is to be interpreted thus: Pupil No. 105 was enrolled in grade low one in 1902, was then six years of age, had entered school the second term of 1901, enrolled in grade

TABLE V

SHOWING PROGRESS OF 23 PUPILS WHOSE RECORDS WERE TRACED FROM 1902 TO SEPTEMBER, 1909

Pupils in Grade 1 in 1902	Age 1902	Term Entered	Grade 1903	Grade 1904	Grade 1905	Grade 1906	Grade 1907	Grade 1908	Grade 1909
5^2.....	6	1st, 1902	2^2	3^1	3^1	4^1	5^1	6^1	7^1
6^2.....	7	1st, 1902	2^2	3^1	4^1	4^2	5^2	6^1	6^2
7^2.....	8	1st, 1899	2^2	3^1	4^1	4^2	5^2	6^2	7^1
17^1.....	6	1st, 1902	1^2	2^2	3^1	3^1	4^1	5^1	6^1
25^1.....	6	1st, 1902	2^2	3^2	4^1	5^1	6^1	7^2	8^1
37^2.....	7	1st, 1902	3^1	4^1	..	..	..	7^1	8^1
47^1.....	6	1st, 1902	1^1	2^2	3^1	4^2	5^2	6^2	7^2
51^2.....	7	1st, 1902	2^1	3^1	4^2	5^2	6^1	7^2	8^1
54^1.....	6	1st, 1902	2^2	3^1	4^2	5^2	6^2	7^2	8^1
56^1.....	6	1st, 1901	1^1	..	..	4^2	5^2	6^2	7^2
68^1.....	6	1st, 1902	2^1	2^2	3^1	4^1	5^1	6^1	7^1
70^2.....	6	1st, 1902	2^2	3^2	4^1	5^1	6^1	7^1	7^2
71^2.....	7	Before 1st, 1900	2^2	2^2	3^1	4^1	4^1	4^2	5^2
81^1.....	6	1st, 1902	..	2^1	2^2	..	..	4^2	5^2
87^2.....	6	Before 1st, 1901	2^2	3^2	3^1	4^1	5^1	6^1	7^1
91^1.....	6	1st, 1902	2^1	2^2	3^1	4^1	5^1	6^2	7^2
96^1.....	6	1st, 1902	..	3^2	4^1	..	..	7^1	8^2
100^2.....	6	1st, 1902	2^1	2^1	3^2	..	4^1	4^2	5^2
101^2.....	7	1st, 1902	2^2	3^2	4^1	5^1	5^2	6^2	7^1
105^1.....	6	2d, 1901	2^2	3^1	4^2	5^1	6^1	7^2	8^1
110^1.....	6	1st, 1902	2^1	2^2	3^1	4^2	5^1	6^2	7^2
113^1.....	6	1st, 1902	2^1	2^2	3^2	4^1	5^1	6^1	7^1
116^1.....	6	2d, 1901	2^1	3^1	4^2	5^2	6^2	7^2	8^1

high two in September, 1903, in low three in 1904, in high four in 1905, in low five in 1906, in low six in 1907, in high seven in 1908, and in low eight in 1909. Considering only the time between 1902 and 1909, he has progressed somewhat irregularly but has accomplished the normal amount of work for that time and attained grade low eight. If all the children had progressed normally all would have been registered in grade low eight in September, 1909. They are, however, seen to be registered as follows:

Number in high eight	(8^2) is	1	(accelerated)
Number in low eight	(8^1) is	6	(normal)
Number in high seven	(7^2) is	5	(retarded)
Number in low seven	(7^1) is	6	
Number in high six	(6^2) is	1	
Number in low six	(6^1) is	1	
Number in high five	(5^2) is	3	
Total............		23	

Percentage of 23 accelerated is 4
Percentage of 23 normal is 26
Percentage of 23 retarded is 69*

As the records of the first-grade children of 1903 of Schools B and C were traced and half-grades could not be distinguished, they should all normally be in the seventh grade in September, 1909. Of 180 names from School B, 65, and of 211 names from School C, 47 are still found upon the registers of the respective schools. These 112 are distributed as follows:

Number in Grade Eight	is	10	(accelerated)
Number in Grade Seven	is	26	(normal)
Number in Grade Six	is	42	(retarded)
Number in Grade Five	is	23	
Number in Grade Four	is	9	
Number in Grade Three	is	2	
Total..........		112	

For the three schools combined:

Number accelerated is	11	or	8.1 per cent
Number normal is	32	or	23.7 per cent
Number retarded is	92	or	68.1 per cent
Total.......	135		

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* A close examination of the individual records discloses a larger percentage of retardation. Individuals 116 and 105 were retarded in 1902 but were counted normal in the table. No. 51, being in grade 1^2 in September, 1902, should normally be in grade 8^2 in September, 1909.

With these figures and those for the same items obtained from Table III may be compared the figures from the report for 1907 of the Cincinnati public schools. On p. 79 of this report is an age-grade table for all the pupils in the schools in June, 1907. This table upon its face appears to be upon the same basis as Ayres's table as regards normal ages for grades. But we are told upon p. 78, "The age of all pupils is given at the birthday occurring between November 1, 1906, and November 1, 1907, so that most of the pupils will appear one year older upon this table than they were upon entering school in September." Thus seven appears upon the table as the normal age for the first grade, while in reality most of the children were six when entering it for the first time in September. The table shows that there were 4,992 six years of age or less upon entering in September, and 4,403 who were seven years of age at that time. As no other age group in the table is as large as the six-year group we must conclude that children are in school in Cincinnati at six years of age. The number of accelerated, normal, and retarded children shown by the table and compiled on p. 80 is as follows:

Accelerated	3,697
Normal	12,269
Retarded	22,433
Total	38,399

A comparison of percentages shows:

	Cincinnati	Chicago (3 schools)	Chicago (135 school biographies)
Accelerated	9.6	9.5	8.1
Normal	31.9	34.9	23.7
Retarded	58.4	55.6	68.1

These figures show considerable similarity. Less than one-tenth do the work of the school faster than the expected normal time, about one-third do it in the time expected, and over one-half require one or more years more than the expected time to do it.

At the suggestion of Professor Dearborn a questionnaire, as reproduced below, was given to the children of School B. It was filled out by all of Grades Eight, Seven, Six, and Five present upon one day and by a section of Grade Four. The object of the experiment was to test the credibility of the method in the way that it would have to be used by an investigator collecting a large mass of statistics. The blank was filled out by 374 children.

Name..
Age.............................. Grade..............................
At what age did you enter school?..
How long have you been in each of the following grades?
Low 1st.............................. High 1st..............................
Low 2d.............................. High 2d..............................
Low 3d.............................. High 3d..............................
Low 4th.............................. High 4th..............................
Low 5th.............................. High 5th..............................
Low 6th.............................. High 6th..............................
Low 7th.............................. High 7th..............................
Low 8th.............................. High 8th..............................
What grades, if any, have you skipped?..
What grades, if any, have you repeated?..

The blanks were given to the principal with the simple request that they be filled. His method of getting it done is not known. They were returned filled in every conceivable way, and it was found that if any results were to be obtained from them it would be necessary to evaluate them at some other than their face value. Of the 374 blanks returned 132 were answered fully and without contradictions. The remainder were studied carefully and given the most probable evaluation. Often portions of the blank were left unfilled. This may have been mere carelessness on the part of the child or he may have forgotten how much time he had spent in a certain half-grade and so omitted filling that space. These omissions were filled in, in their evaluation, in such a way as would account for the time reported as having been spent in school, i.e., the difference between the age at entering and the present age. Many other small considerations entered in in evaluating the individual blanks which it would be too tedious to discuss and which might not apply to any other similar set.

The blanks were divided into four groups according to the character of school progress shown, the normal group, composed of those who had completed one grade per year of school life;

what I have called the pure accelerated group, those who have skipped one or more half-grades and repeated none; the pure repeaters who have repeated one or more half-grades and skipped none; and the mixed group who have skipped one or more half-grades and repeated one or more half-grades. This grouping is shown in Table VI. Under the head of an interrogation point are those so imperfectly filled that to determine any grouping for them was impossible.

TABLE VI

Grade	Normal	Pure Accelerated	Pure Repeaters	Mixed	?	Total
VIII........	7	21	11	31	6	76
VII..........	27	12	12	21	18	90
VI...........	27	13	14	25	16	93
V............	8	16	9	23	27	83
IV...........	12	3	6	9	2	32

This shows the number of pupils in each half-grade who have progressed normally, are accelerated without having repeated (pure accelerated), have repeated without skipping (pure repeaters), have both repeated and skipped (mixed).

The most significant item of this table is the column headed *mixed* which shows the large number of irregular careers through the grades, and the comparatively small number in the normal column. The number of half-grades skipped and repeated is shown by grades in Table VII.

TABLE VII

	Skipped	Repeated	Gained	Lost	Number Pupils
Grade VIII.............	103	68	35	..	70
Grade VII..............	64	79	..	15	72
Grade VI...............	75	109	..	34	77
Grade V................	62	93	..	31	56
Grade IV...............	15	38	..	23	30

Our table shows that the eighth grade gained on an average of one-half of a half-grade or one-fourth of a year per pupil: the seventh grade has lost nearly one-tenth of a year; the sixth grade has lost more than one-fourth of a year; the fifth grade has lost nearly one-fourth of a year; and the fourth grade has lost nearly one-half of a year.[7]

Table VIII shows the number of times each half-grade was repeated by the 305 children whose blanks were evaluated. Table IX shows how many half-grades were skipped by the same children. These show that the grades most repeated are those between the second and the fifth inclusive, those skipped the most are high first, high second, low and high third, and high fourth. The third and the fourth grades appear in both groups, indicating that it is in those grades that the most readjustment takes place.

TABLE VIII

SHOWING NUMBER OF TIMES EACH HALF-GRADE WAS REPEATED BY 305 CHILDREN

Low First	17	High First	15
Low Second	24	High Second	25
Low Third	30	High Third	32
Low Fourth	47	High Fourth	34
Low Fifth	38	High Fifth	36
Low Sixth	19	High Sixth	26
Low Seventh	11	High Seventh	12
Low Eighth	5	High Eighth	4

TABLE IX

SHOWING NUMBER OF TIMES EACH HALF-GRADE WAS SKIPPED BY 305 CHILDREN

Low First	24	High First	39
Low Second	20	High Second	31
Low Third	30	High Third	35
Low Fourth	11	High Fourth	29
Low Fifth	19	High Fifth	19
Low Sixth	18	High Sixth	21
Low Seventh	14	High Seventh	8
Low Eighth	0		

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[7] There is an apparent discrepancy between the eighth-grade data of this table and of Table III, which shows 55 per cent. retardation. It is accounted for in the following way: 11 of the 31 mixed pupils repeated more than they skipped and are therefore retarded; 11 from Table VI are pure repeaters, and 8 others of the *mixed* pupils started late and did not skip enough to reach the eighth grade at the normal age. This gives a retardation percentage of 42.8 on 70 pupils; the retardation percentage on the age-grade table for this school is 49.4 on 91 pupils half of whom have graduated and left the school in the interval between the securing of the two sets of data.

From these blanks was obtained an additional item of information as to the time at which children enter school. Of those who answered the question, "At what age did you enter school?" 238 entered at six years of age or less, 50 at seven years, 8 at eight years, and 4 at nine years of age. A number who answered that they had entered at seven years of age or more were adjudged not real beginners, as their blanks showed in each case that less than two weeks of time was spent in the first half of the first grade. These children had most certainly received private instruction and could not be classed as beginners. Superintendent Greenwood of Kansas City, in a criticism of Mr. Ayres's methods, made the statement that children often entered school at seven years of age or more and progressed more rapidly than those entering at six.[8] This may be true for Kansas City where children are not permitted to enter the kindergarten before six. The information gained from our blanks does not indicate that the same may be true for Chicago. These show that the number of half-grades skipped by those entering at seven and now below the eighth grade is 24, half-grades repeated 39, leaving a net loss of 15 half-grades for 50 pupils. Since a large majority of children enter school at six years of age that must be considered the normal age for the first grade, or we are reduced to the alternative of allowing to this majority two years instead of one for the completion of the grade.

The results of this study show that the retardation of our schools is probably much greater than Mr. Ayres's figures show, a thing which Mr. Ayres himself suspected. They also indicate that what we have been calling retardation is not retardation but a course of study unsuited to the powers of the children who pursue it. To say that more than half of our children are backward is certainly to make an anomalous statement. Though there are enough really backward children in our schools for whom special teaching and care are necessary, it would seem that the thing now most important is such study as will result in subject-matter properly adapted to the child's abilities and age.

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[8] *Education,* May, 1908.